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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,539	03/31/2004	David M. Callaghan	03AB111/ALBRP333US	7412
7590 Susan M. Donahue Rockwell Automation 704-P, IP Department 1201 South 2nd Street Milwaukee, WI 53204				
EXAMINER				
KANE, CORDELLA P				
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2432				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/814,539

**Applicant(s)**

CALLAGHAN, DAVID M.

**Examiner**

CORDELIA KANE

**Art Unit**

2432

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 42-64 is/are pending in the application.
- 4a) Of the above claim(s) 12-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 42 – 64 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 53 – 59, and 60 – 64 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claims 53 and 60, applicant claims establishing rules of use for the message. It is unclear where in the specification this limitation is taught.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 53 – 59 and 60 – 64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 53 and 60, applicants

claims establishing rules of use for the message. However, in the other claims and specification the rules of use were for the automation device, not a message. For the purposes of examination it is assumed that rules of use of the automation device was intended.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

7. Claims 42 – 49, 52 – 57 and 60 – 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefik et al's US Patent 6,959,290 B2, and further in view of Lo's US Publication 2003/0061274 A1. Referring to claim 42, Stefik teaches:

- a. A certification component that generates certificates for specific automation devices (column 51, lines 9-13).
- b. An access component that establishes rules of use for the automation device based on at least one of the identification of an entity wanting to access the device (column 51, lines 39-43).

8. Stefik does not explicitly disclose the device controls an industrial process. However, Lo discloses a system for programming a controller such as a PLC or other industrial controller (page 2, paragraph 13), and checking the access rights before allowing someone to modify the controller (page 5, paragraph 64). Stefik and Lo are analogous art because they are from the same field of endeavor, access rights. At the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Stefik and Lo before him or her, to modify the system of Stefik to include the industrial PLC of Lo. The suggestion/motivation for doing so would have been because PLCs are used in many commercial and industrial applications (page 1, paragraph 2).

9. Referring to claim 43, Stefik teaches that the system is executed remote from the automation device (column 41, lines 23-24).

10. Referring to claim 44, Stefik teaches that the communication occurs over a LAN (column 14, lines 50-51).

11. Referring to claim 45, Stefik teaches that the communications are secured using digital certificates which bind public keys to specific entities to facilitate decryption of messages as well as authentication of the sender (column 51, lines 5-8).

12. Referring to claim 46, Stefik teaches that the message is digitally signed to enable the message to be authenticated (column 51, lines 5-8).

13. Referring to claim 47, Stefik teaches that access to the access component is restricted to a particular user or group of users via certificates (column 12, lines 33-36).

14. Referring to claim 48, Stefik teaches that the devices includes an access credential component which defines and restricts access to particular objects and services based on the identity of the user as established by the certificate (column 7, lines 20-24).

15. Referring to claim 49, Stefik teaches a virtual key component adapted to retrieve identifying information from a certificate (column 26, lines 35-38).

16. Referring to claim 52, Stefik teaches that the automation device includes an I/O device (column 7, lines 55-57).
17. Referring to claims 53 and 59, Stefik teaches:
  - c. Encrypting a message to be sent to a automation device utilizing a key derived from a certification component, the key has been uniquely created for the first automation device (column 27, lines 7-9).
  - d. Transmitting the encrypted message to the second automation device, wherein the certification component verifies the identity of the first automation device, and an access component establishes rules of use for the automation device based at least upon the identity of the automation device (column 27, lines 19-35).
18. Stefik does not explicitly disclose the device is associated with an industrial process. However, Lo discloses a system for programming a controller such as a PLC or other industrial controller (page 2, paragraph 13), and checking the access rights before allowing someone to modify the controller (page 5, paragraph 64). Stefik and Lo are analogous art because they are from the same field of endeavor, access rights. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Stefik and Lo before him or her, to modify the system of Stefik to include the industrial PLC of Lo. The suggestion/motivation for doing so would have been because PLCs are used in many commercial and industrial applications (page 1, paragraph 2).
19. Referring to claim 54, Stefik teaches:

- e. Receiving an encrypted message from an automation device or device controller (column 27, line 21).
  - f. Locating a certificate component associated with the automation device sending the message (column 27, lines 21-23).
  - g. Decrypting the message utilizing the public key provided by the certificate component (column 27, lines 26-27).
20. Stefik does not explicitly disclose the device is associated with an industrial process. However, Lo discloses a system for programming a controller such as a PLC or other industrial controller (page 2, paragraph 13), and checking the access rights before allowing someone to modify the controller (page 5, paragraph 64). Stefik and Lo are analogous art because they are from the same field of endeavor, access rights. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Stefik and Lo before him or her, to modify the system of Stefik to include the industrial PLC of Lo. The suggestion/motivation for doing so would have been because PLCs are used in many commercial and industrial applications (page 1, paragraph 2).
21. Referring to claim 55, Lo teaches that the automation device is an industrial PLC (page 2, paragraph 13)
22. Referring to claim 56, Stefik discloses that the message is a program (column 42, lines 17-18).
23. Referring to claim 57, Stefik teaches searching the local device store (column 27, lines 21-23).

24. Referring to claims 60 and 64, Stefik discloses:

h. Generating a digitally signed message component comprising a message, a message digest, a certificate component, and hash function data, wherein the message component is generated by a first industrial automation device (column 42, lines 11-20).

i. Transmitting the message component to a second industrial automation device, wherein the certification component verifies the identity of at least one of the first or second automation devices (column 42, lines 11-12) and an access component establishes rules of use of the message based upon the identity of at least one of the automation devices (column 41, lines 41-53).

25. Stefik does not explicitly disclose that the automation device is industrial.

However, Forth discloses using an industrial PLC to store instructions to perform I/O control (page 2, paragraph 25). Stefik and Forth are analogous art because they are from the field of Endeavor, input/output. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Stefik and Forth before him or her, to modify the input/output system of Stefik to include the industrial PLC of Forth. The suggestion/motivation for doing so would have been to provide increased versatility and additional functionality (page 2, paragraph 22).

26. Referring to claims 61 and 62, Stefik discloses encrypting the message prior to transmission (column 42, lines 11-16).

27. Referring to claim 63, Stefik discloses authenticating the message by retrieving a hash function in accordance with the hash information (column 42, lines 11-15),

generating a message digest by applying the retrieved hash function to the received message and comparing the generated message digest with the message digest retrieved from the message component (column 42, lines 17-20).

28. Claims 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefik in view of Lo as applied above, and further in view of Asunmaa et al's US Publication 2003/0172090 A1. Stefik in view of Lo discloses all the limitations of the parent claims including, using a key component to retrieve identifying information (Stefik, column 26, lines 35-38), and embedding the repository in a card (Stefik, column 16, lines 2-3). Stefik in view of Lo does not explicitly disclose the card being a SIM card. However, Asunmaa discloses using a SIM card to authenticate a user (page 4, paragraph 59). Stefik in view of Lo and Asunmaa are analogous art because they are from the same field of endeavor, authentication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Stefik in view of Lo and Asunmaa before him or her, to modify the card of Stefik in view of Lo to include the SIM card of Asunmaa. The suggestion/motivation for doing so would have been to have reliable authentication of a data terminal (page 4, paragraph 59).

29. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stefik in view of Lo as applied above, and further in view of Meffert et al's US Publication 2002/0059144 A1. Stefik in view of Lo discloses all the limitations of the parent claims. Stefik in view of Lo does not explicitly disclose downloading the certificate. However, Meffert discloses downloading the certificate and private keys (page 11, paragraph

109). Stefik in view of Lo and Meffert are analogous art because they are from the same field of endeavor, digital rights management. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Stefik in view of Lo and Meffert before him or her, to modify receiving the certificate of Stefik to include downloading the certificate of Meffert. The suggestion/motivation for doing so would have been to be able to identify the rights set and match the certificate to the private key (page 11, paragraph 109).

### ***Conclusion***

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. K./  
Examiner, Art Unit 2432

/Benjamin E Lanier/  
Primary Examiner, Art Unit 2432